

Amendments to the Claims:

This listing of claims replaces all prior versions and listings of claims in the application:

Listing of Claims:

1. (Currently Amended) A Bayer process, comprising ~~which includes a step of treating~~ treating any one or more of: (a) Bayer liquor or liquors produced in the process, (b) precipitated aluminium trihydrate particles produced in the process, and (c) other solids added to or produced in the process, with ultrasonic energy and destroying organics in the liquor or liquors, on the precipitated aluminium trihydrate particles, and on the other solids.

2. (Currently Amended) The process ~~defined in~~ of claim 1 wherein the treatment step is carried out on a Bayer liquor or liquors and/or precipitated aluminium trihydrate particles from any part of the Bayer process.

3. (Currently Amended) The process ~~defined in~~ of claim 1 wherein the treatment step is carried out on side streams of the Bayer liquor or liquors from any part of the Bayer process.

4. (Currently Amended) The process ~~defined in any one of the preceding claims~~ of claim 1 wherein the treatment step is carried out on a Bayer liquor or liquors and/or precipitated aluminium trihydrate particles and/or other solids that have relatively high concentrations of organics compared to other Bayer liquors and particles in the process.

5. (Currently Amended) The process ~~defined in any one of the preceding claims~~ of claim 1 wherein the precipitated aluminium trihydrate particles are intermediate and fine seed particles that are separated from a precipitation slurry from a precipitation step of the Bayer process.

6. (Currently Amended) The process ~~defined in any one of the preceding claims~~ of claim 1 wherein the other solids is a collector material for organics.

7. (Currently Amended) The process ~~defined in~~ of claim 6 wherein the treatment step includes separating the collector material with attached organics from the Bayer liquor or liquors into a side stream and treating the side stream with ultrasonic energy and destroying organics on the collector material.

8. (Currently Amended) The process ~~defined in~~ of claim 7 wherein the treatment step includes regenerating the collector material for reuse in the process to collect more organics for ultrasonic energy treatment.

9. (Currently Amended) The process ~~defined in any one of claims~~ claim 6 ~~to 9~~ wherein the collector material includes resins and activated carbon.

10. (Currently Amended) The process ~~defined in any one of claims~~ claim 6 ~~to 10~~ wherein the collector material includes particles or beads of collector material.

11. (Currently Amended) The process ~~defined in any one of claims 6 to 11~~ claim 10 wherein the ~~collector material includes~~ particles or beads of collector material ~~that~~ are sufficiently large to be readily separated from Bayer liquor.

12. (Currently Amended) The process ~~defined in any one of claims~~ claim 6 ~~to 11~~ wherein the collector material is a material that has a higher density than Bayer liquor to facilitate separation from Bayer liquor by settling.

13. (Currently Amended) The process ~~defined in any of claims~~ claim 6 ~~to 11~~ wherein the collector material is a material that has a lower density than Bayer liquor and/or is hydrophobic to facilitate separation from Bayer liquor by flotation.

14. (Currently Amended) The process ~~defined in any one of claims~~ claim 6 ~~to 13~~ wherein the collector material is a material that can be separated magnetically.

15. The process ~~defined in~~ of claim 14 wherein the collector material includes fine particles prepared by applying an organic/polymer coating onto fine precipitated iron containing

particles.

16. (Currently Amended) The process ~~defined in any one of the preceding claims of~~ claim 1 wherein the treatment step includes treating the Bayer liquor or liquors and/or precipitated aluminium trihydrate particles and/or other solids with ultrasonic energy of sufficiently high energy that it causes cavitation in Bayer liquor or at the surface of the particles.

17. (Currently Amended) The process ~~defined in any one of the preceding claims of~~ claim 1 wherein the treatment step includes treating the Bayer liquor or liquors and/or precipitated aluminium trihydrate particles and/or other solids with a continuous stream of ultrasonic energy or pulses stream of ultrasonic energy.

18. (Currently Amended) A Bayer process, comprising ~~which includes a step of~~ treating Bayer liquor or liquors produced in the process with ultrasonic energy and destroying organics in the liquor or liquors.

19. (Currently Amended) A Bayer process, comprising ~~which includes a step of~~ treating precipitated aluminium trihydrate particles produced in the process with ultrasonic energy and destroying organics on the particles.

20. (Currently Amended) A Bayer process, comprising ~~which includes a step of~~ treating a collector material for organics added to the process with ultrasonic energy and destroying organics on the collector material.